

Ship Sept 13.

Work Order ID 150810

150810

Page 1

Wednesday, September 07, 2016 11:36:55 A

Item ID: D5076-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Fwd Bracket Assembly
 Start Date: 9/7/2016 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 9/9/2016 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: dm Date: 16/09/07 Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D5076	A								
100		0.00							
100									
Small Fab	Memo	0.04							
Small Fab	1- Assemble as per dwg ***TORQUE SCREW AS PER DWG, SEE NOTE 8, SHEET 1***								
110	QC5- Inspect part completeness to step on W/O	0.00							
110									
QC	Memo	0.00							
Quality Control									
120		0.00							
120									
Packaging	Memo	0.00							
Packaging									

Pick kit

SEP 08 2016

DAS
6
9-89

1 FF SEP 08 2016

DAS
38
9-89

SEP 09 2016

1

DAS
6
9-89

SEP 09 2016

ST 6/7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval 		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				

Work Order ID 150810

Wednesday, September 07, 2016 11:36:55 A

150810

Page 2

Item ID: D5076-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Fwd Bracket Assembly
Start Date: 9/7/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 9/9/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC21- Final Inspection - Work Order Release	0.00							
130							DAS 21	SEP 09 2016	
QC	Memo	0.02					9-89		
Quality Control									

DAS
21
9-89

SEP 09 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 1

Work Order ID: 150810

150810

Parent Item: D5076-041

D5076-041

Parent Item Name: Fwd Bracket Assembly

Start Date: 9/7/2016

Required Date: 9/9/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 14.04.02 PER DWG REV.A DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN525-832R7

Purchased

No

Each

114.0000

4

AN525-832R7

**

DAS

Screw

6

9-89

Location

Loc Qty

Loc Code

GA

47

m134070

47

ST328

67

m134070

67

D4434-045

Manufactured

No

Each

1.0000

1

D4434-045

**

DAS

Fwd Outboard Bracket Assembly

6

9-89

Location

Loc Qty

Loc Code

ST619

1

146845

1

D5076-043

Manufactured

No

Each

3.0000

1

D5076-043

**

DAS

Fwd Inboard Bracket Assembly

6

9-89

Location

Loc Qty

Loc Code

ST624

2

139054

2

ST636

1

131114

1

SEP 08 2016

DQA: _____ Date: _____



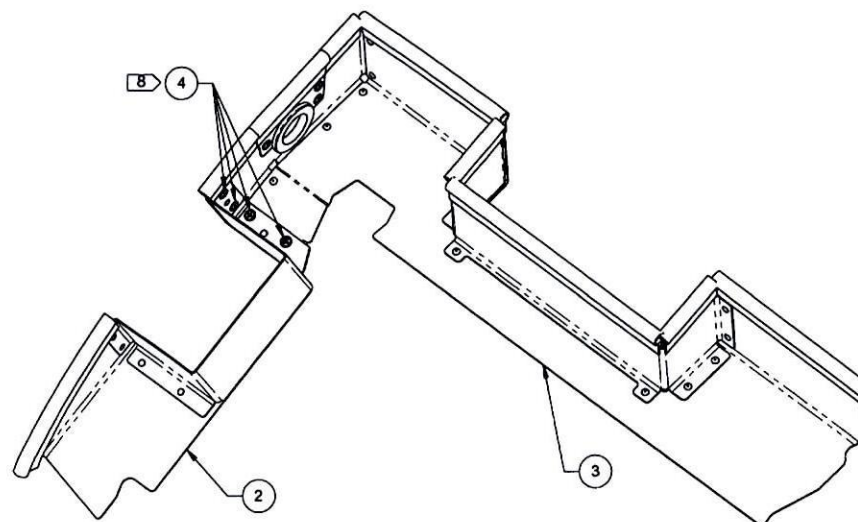
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

ITEM	QTY. -041	PART NUMBER	DESCRIPTION
1	X	D5076-041	FWD BRACKET ASSEMBLY
2	1	D4434-045	FWD OUTBOARD BRACKET ASSEMBLY
3	1	D5076-043	FWD INBOARD BRACKET ASSEMBLY
4	4	AN525-832R7	SCREW



D5076-041 FWD BRACKET ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.39 lbs
- 8) TORQUE SCREW TO 12-15 (in-lb)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150810

16/09/07

RELEASED
2014-03-31

APPROVED

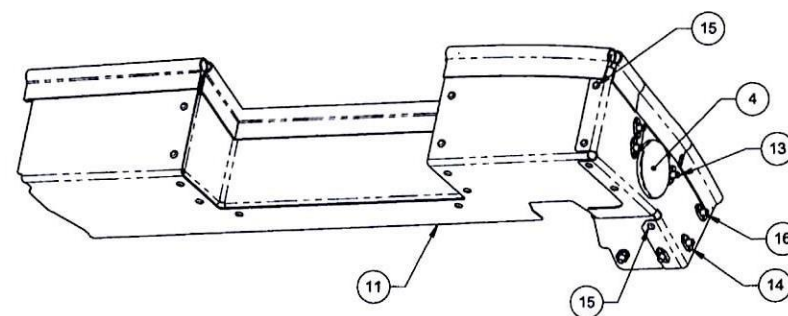
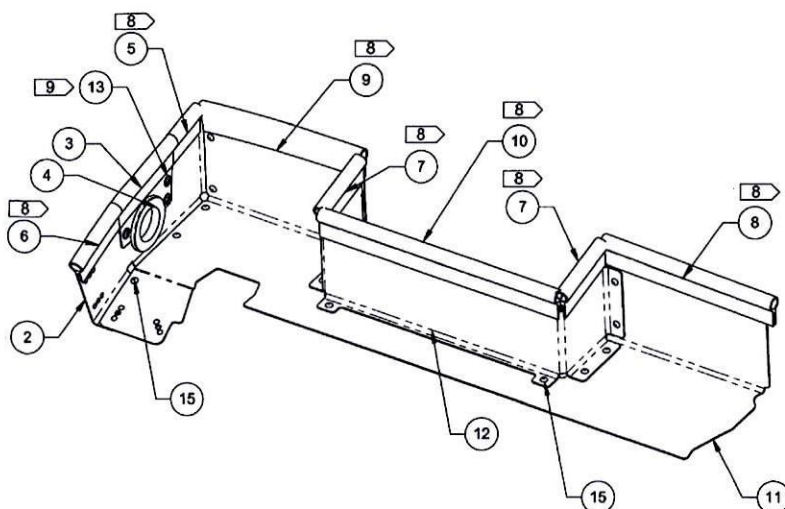
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REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED	DC		
MFG. APPR.	DD		
APPROVED	HS		
DE APPR.	DS		
DATE	14.03.11		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D5076** REV. A
SHEET 1 OF 7
TITLE **BRACKET ASSEMBLY** SCALE NTS

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ITEM	QTY. -043	PART NUMBER	DESCRIPTION
1	X	D5076-043	FWD INBOARD BRACKET ASSEMBLY
2	1	D4434-9	BRACKET
3	1	D4435-041	BRACKET ASSEMBLY
4	1	D4440-1	GROMMET
5	1	D4441-1-017	RUBBER SEAL
6	1	D4441-1-025	RUBBER SEAL
7	2	D4441-1-026	RUBBER SEAL
8	1	D4441-1-067	RUBBER SEAL
9	1	D4441-1-064	RUBBER SEAL
10	1	D4441-1-094	RUBBER SEAL
11	1	D5076-1	BRACKET
12	1	D5076-3	BRACKET
13	3	AN525-832R6	SCREW
14	14	MS20426AD3-3	RIVET
15	15	MS20470AD4-3	RIVET
16	7	MS21075L08	NUT PLATE
17	A/R	3M 1300/1300L	ADHESIVE



D5076-043 FWD INBOARD BRACKET ASSEMBLY

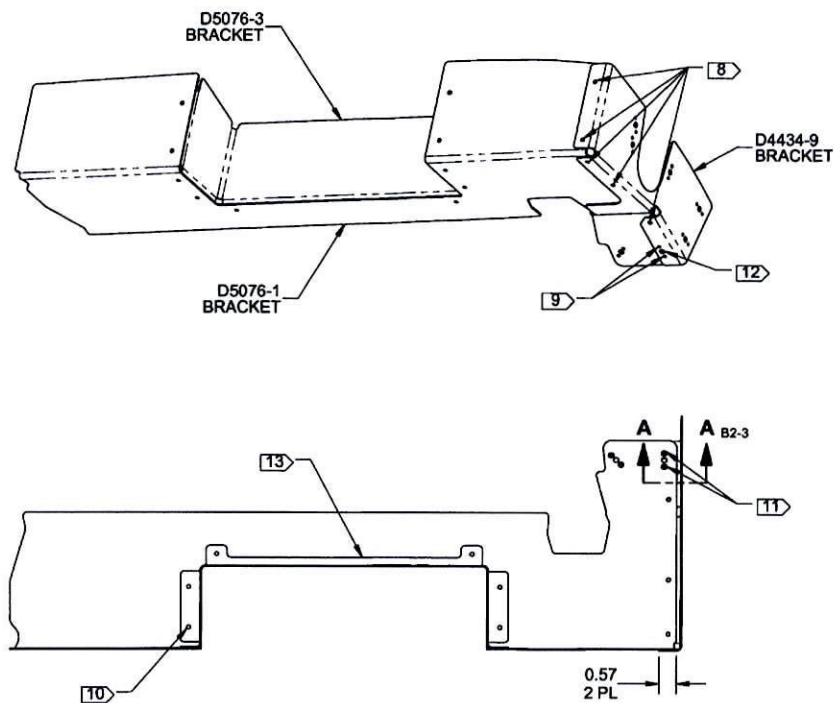
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "BLACK SANDEX" (4.3.5.7) PER DART QSI 005 4.3 PRIOR TO INSTALLING D4435-041.
MASK NUT PLATE HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.01 lbs
- 8) INSTALL RUBBER SEAL TO EDGE OF PART AFTER POWDER COAT USING 3M 1300/1300L ADHESIVE
ENSURE COVER IS COMPLETELY INSERTED INTO GROOVE OF RUBBER SEAL
IT IS ACCEPTABLE TO NOTCH THE SEAL AS REQUIRED TO PREVENT IT FROM BUCKLING
- 9) TORQUE SCREW TO 12-15 (in-lb)

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2014-03-31

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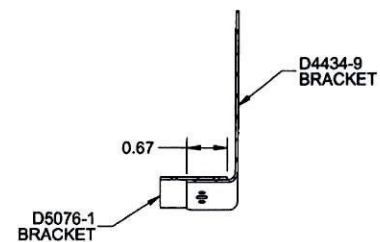
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DRAWN	RF		
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	DD	D5076	SHEET 2 OF 7
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	BRACKET ASSEMBLY	NTS
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D5076-043 FWD INBOARD BRACKET ASSEMBLY
AUXILIARY VIEW

NOTES:

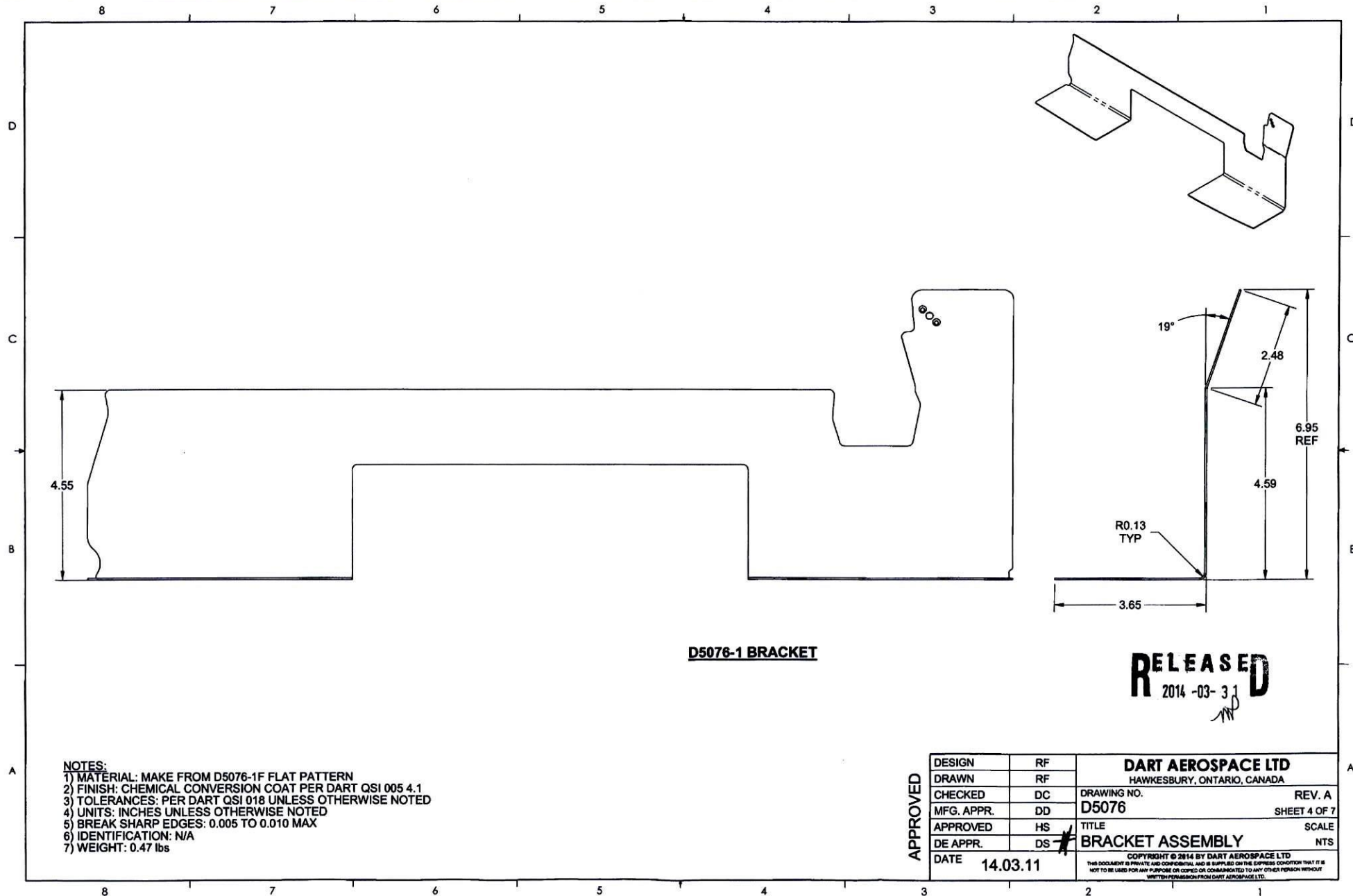
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.78 lbs
- 8) TRANSFER $\phi 0.129$ HOLES THRU 5 PLACES FROM D4434-9 TO D5076-1
- 9) TRANSFER $\phi 0.098$ HOLES THRU 2 PLACES FROM D4434-9 TO D5076-1
- 10) TRANSFER $\phi 0.129$ HOLES THRU 10 PLACES FROM D5076-3 TO D5076-1
- 11) CSK $\phi 0.179 \times 100^\circ$ ON THIS SIDE 2 PLACES
- 12) TRANSFER $\phi 0.177$ HOLE THRU FROM D4434-9 TO D5076-1
- 13) CENTRE D5076-3 INTO OPENING OF D5076-1



SECTION A-A C4-3

RELEASED
2014-03-31

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	DRAWN	RF		
	CHECKED	DC	DRAWING NO.	REV. A
	MFG. APPR.	DD	D5076	SHEET 3 OF 7
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	BRACKET ASSEMBLY	NTS
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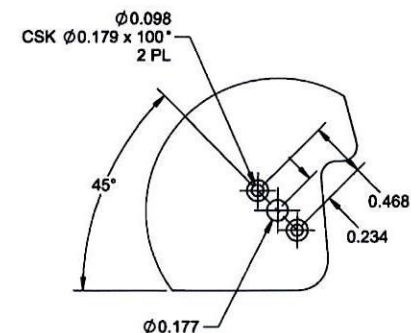
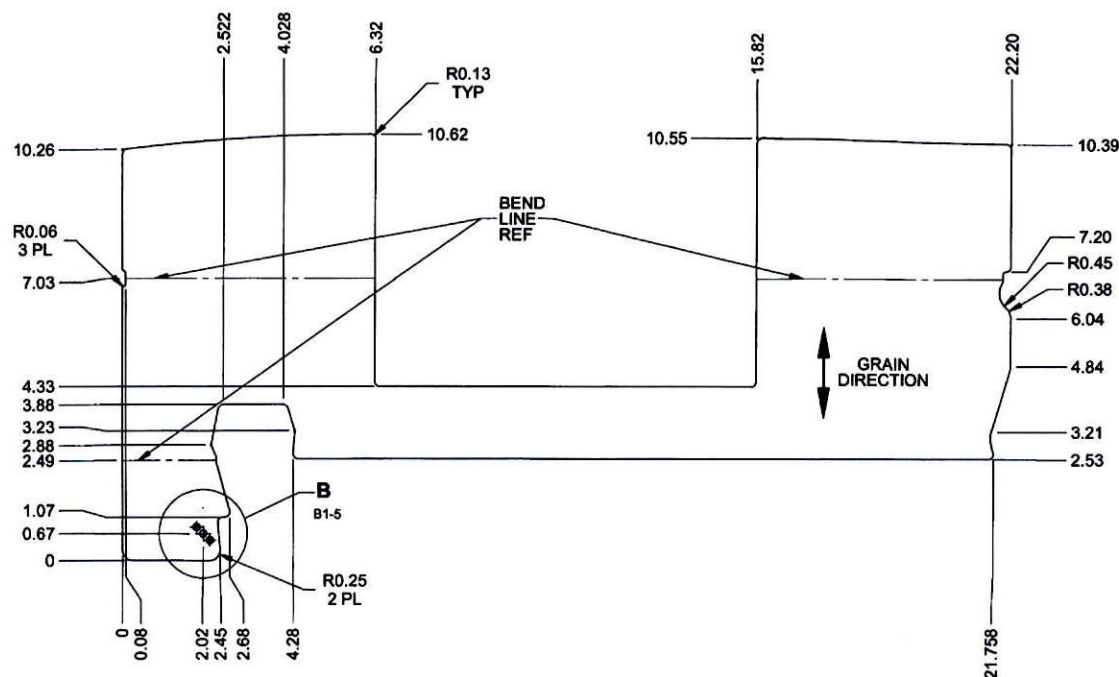
NOTES:

- 1) MATERIAL: MAKE FROM D5076-1F FLAT PATTERN
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.47 lbs

APPROVED

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DC	DRAWING NO. D5076	REV. A
MFG. APPR.	DD	SHEET 4 OF 7	
APPROVED	HS	TITLE	SCALE
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2014-03-31



DETAIL B B7-5

D5076-1F FLAT PATTERN BRACKET

NOTES:

1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET 0.040 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027
OR ASTM B209
REF DART SPEC. M6061T6S.040

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

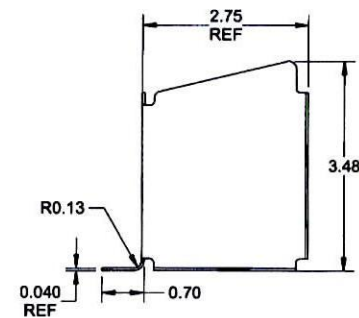
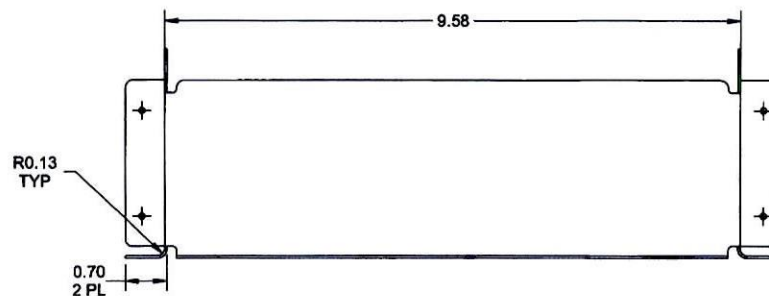
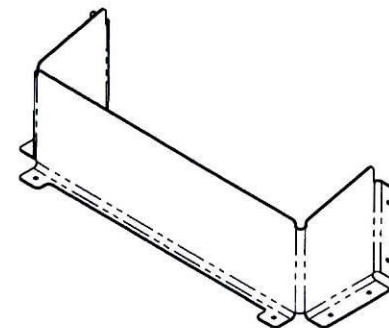
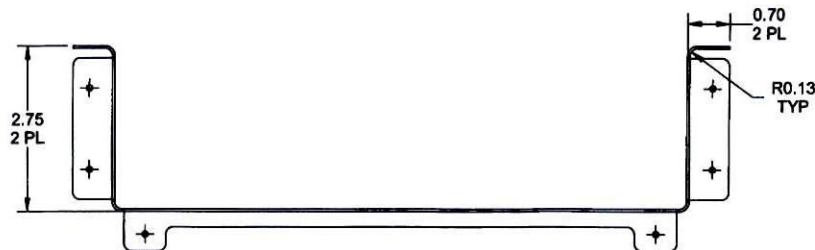
6) IDENTIFICATION: N/A

7) WEIGHT: 0.47 lbs

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2014-03-31

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DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	DD	D5076	SHEET 5 OF 7
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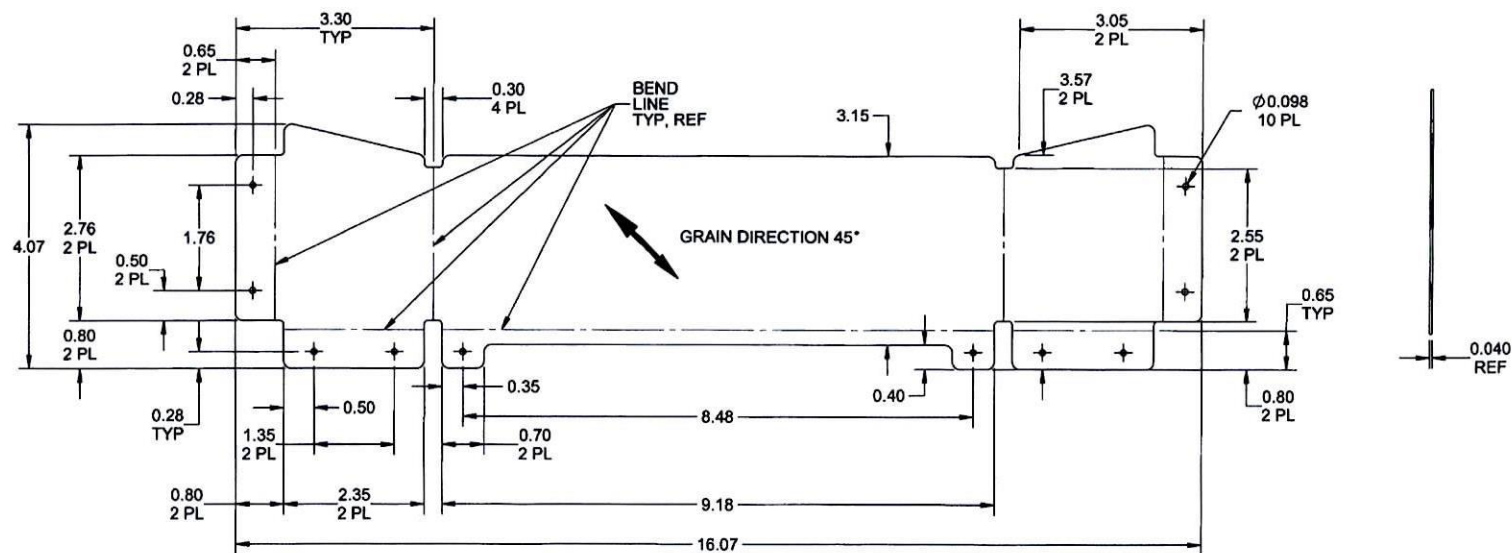
D5076-3 BRACKET

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2014-03-31

- NOTES:**
- 1) MATERIAL: MAKE FROM D5076-3F FLAT PATTERN
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.21 lbs

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DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	DC	DRAWING NO. D5076	REV. A
MFG. APPR.	DD	TITLE BRACKET ASSEMBLY	SHEET 6 OF 7
APPROVED	HS		SCALE
DE APPR.	DS		NTS
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D5076-3F FLAT PATTERN BRACKET

NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET 0.040 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027
OR ASTM B209
REF DART SPEC. M6061T6S.040
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.21 lbs

RELEASED
2014-03-31

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DRAWN	RF		
CHECKED	DC	DRAWING NO.	REV. A
MFG. APPR.	DD	D5076	SHEET 7 OF 7
APPROVED	HS	TITLE	SCALE
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